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**From:** Wirick, Holiday [wirick.holiday@epa.gov]  
**Sent:** 7/6/2021 11:56:48 PM  
**To:** Wax, Peter N. [pwax@nd.gov]  
**Subject:** Re: WQS review re: ALC for Hg

Hi Pete, in my ND WQS approval letter (and ESA-related dox), I need to include a rationale for each WQS approval action indicating how it's consistent with EPA's 304(a) criteria recommendations.

I'm reading through EPA's "The Metals Translator: Guidance for Calculating a Total Recoverable Permit Limit from a Dissolved Criterion." Can you please send me the equation/translator ND used to calculate the Hg chronic 0.88 ug/L total recoverable from EPA's recommended dissolved criterion of 0.77 ug/L (and any other info you may have related to this revision) so I can include it in my rationale?

Thanks. Perpetually grateful...

Holly

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**From:** Wax, Peter N. <pwax@nd.gov>  
**Sent:** Tuesday, July 6, 2021 8:56 AM  
**To:** Wirick, Holiday <wirick.holiday@epa.gov>  
**Subject:** RE: WQS review re: ALC for Hg

Dear Holly:

You are very different, but just as great as Lareina. Together you would rule the world so it is best you are on opposite sides of the Country.

Pete

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**From:** Wirick, Holiday <wirick.holiday@epa.gov>  
**Sent:** Tuesday, July 6, 2021 9:28 AM  
**To:** Wax, Peter N. <pwax@nd.gov>  
**Subject:** Re: WQS review re: ALC for Hg

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Thanks Pete. Where's Lareina when I need her?!

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**From:** Wax, Peter N. <pwax@nd.gov>  
**Sent:** Tuesday, July 6, 2021 7:47 AM  
**To:** Wirick, Holiday <wirick.holiday@epa.gov>  
**Subject:** RE: WQS review re: ALC for Hg

Dear Holly:

0.88 ug/L (Total recoverable) is the converted from 0.77 ug/L dissolved.

Pete

**From:** Wirick, Holiday <wirick.holiday@epa.gov>  
**Sent:** Thursday, July 1, 2021 4:33 PM  
**To:** Wax, Peter N. <pwax@nd.gov>  
**Subject:** WQS review re: ALC for Hg

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Hi Pete, I hope all is well... (it was until you read the following...)

I'm drafting ND's WQS approval letter and just noticed that I missed something very important in my review of ND's draft WQS last fall - the chronic criterion for mercury. It should be 0.77 ug/L, not 0.88 ug/L.

Pete, I am so very sorry. I know we discussed this issue last summer (email below), but I deeply apologize for completely missing the Hg chronic WQC in my review of the draft WQS last fall.

In the WQS approval letter, I can list this revision as one that the EPA is not acting on - and then you can make the change in a future WQS revision to adopt EPA's chronic mercury criterion of 0.77 ug/L.

Below is the link to EPA's aquatic life criteria table.

Another option to consider is for North Dakota to hold off adopting EPA's currently recommended chronic criterion for mercury. As I mentioned a year ago (almost to the day), litigation in Idaho might result in a methyl mercury number to replace the 1995 criteria, but who knows when that may occur?

Attached is the Biological Opinion from NMFS on ESA consultation for Idaho's toxics WQS. Erica Fleisig summarized NMFS's conclusion that EPA's chronic WQC for mercury would not protect aquatic life and may even jeopardize the species and recommends that Idaho move away from the organic number to a methyl mercury number (pp 144-162).

Again, I deeply apologize for missing the chronic mercury criterion. I owe you paint supplies, hunting dog toys, scotch... whatever you wish. We can talk about this tomorrow if you have time as I'm heading to my class in a few minutes to blow off some steam by playing some heavy, distorted guitar music...

<https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table#table>



## National Recommended Water Quality Criteria - Aquatic Life Criteria Table | Water Quality Criteria | US EPA

This table contains the most up to date criteria for aquatic life ambient water quality criteria. Aquatic life criteria for toxic chemicals are the highest concentration of specific pollutants or parameters in water that are not expected to pose a significant risk to the majority of

species in a given environment or a narrative description of the desired conditions of a water body being "free ...

[www.epa.gov](http://www.epa.gov)

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**From:** Wirick, Holiday <[wirick.holiday@epa.gov](mailto:wirick.holiday@epa.gov)>

**Sent:** Thursday, July 2, 2020 10:24 AM

**To:** Wax, Peter N. <[pwax@nd.gov](mailto:pwax@nd.gov)>

**Subject:** Re: Hg Fish

I was referring to the aquatic life methyl mercury criteria from 1995 which is 1.4 ug/L acute and 0.77 ug/L chronic for freshwater.

For human health, the 2001 methyl mercury criterion for the consumption of organism only is 0.3 mg/kg. The fish tissue residue criterion for methylmercury is based on a total fish consumption rate of 0.0175 kg/day.

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**From:** Wax, Peter N. <[pwax@nd.gov](mailto:pwax@nd.gov)>

**Sent:** Thursday, July 2, 2020 10:20 AM

**To:** Wirick, Holiday <[wirick.holiday@epa.gov](mailto:wirick.holiday@epa.gov)>

**Subject:** RE: Hg Fish

For aquatic life? Or translating methylmercury to human health from fish ?

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**From:** Wirick, Holiday

**Sent:** Thursday, July 2, 2020 11:12 AM

**To:** Wax, Peter N. <[pwax@nd.gov](mailto:pwax@nd.gov)>

**Subject:** Re: Hg Fish

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OK. There are some issues with it though which is what I was going to mention. Litigation in Idaho might result in a methyl mercury number to replace the current 1995 criteria, but who knows when that may be?

Have a great 4th!

Holly

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**From:** Wax, Peter N. <[pwax@nd.gov](mailto:pwax@nd.gov)>

**Sent:** Thursday, July 2, 2020 9:53 AM

**To:** Wirick, Holiday <[wirick.holiday@epa.gov](mailto:wirick.holiday@epa.gov)>

**Subject:** RE: Hg Fish

I got it.

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**From:** Wirick, Holiday  
**Sent:** Wednesday, July 1, 2020 1:57 PM  
**To:** Wax, Peter N. <[pwax@nd.gov](mailto:pwax@nd.gov)>  
**Subject:** Re: Hg Fish

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Hi Pete, just a quick note to ask if I can respond to you tomorrow? I'm working on a fire drill right now - but great news on the ammonia.

Thanks,  
Holly

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**From:** Wax, Peter N. <[pwax@nd.gov](mailto:pwax@nd.gov)>  
**Sent:** Wednesday, July 1, 2020 6:44 AM  
**To:** Wirick, Holiday <[wirick.holiday@epa.gov](mailto:wirick.holiday@epa.gov)>  
**Subject:** Hg Fish

Holly:

What is the EPA recommended Methyl Mercury concentration.

Ammonia has survived the Section Chiefs review. Will be for all waters and removing all site specifics.

Need to explain why we are still protective moving Hg to 304 recommended number.

Pete

Peter N. Wax  
Special Projects  
Division of Water Quality

701.328.5268 • [pwax@nd.gov](mailto:pwax@nd.gov) • <https://deq.nd.gov/>

